



PATENT
Customer No. 22,852
Attorney Docket No. 09032.0001-00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:)
Knut BRABRAND) Group Art Unit: 3737
Application No.: 10/725,431)
Filed: December 3, 2003) Examiner: Ramirez, John F.
For: RESPIRATION MONITOR) Confirmation No.: 5321

Attention: Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

(**REPLY BRIEF**

Pursuant to 37 CFR § 41.41(a)(1), Appellant presents this Reply Brief in
response to the Examiner's Answer mailed on May 27, 2009.

I. Response to Examiner's Arguments in the Answer

In addition to the reasoning supporting reversal of the outstanding final rejection provided in Appellant's Appeal Brief filed on September 4, 2007, Appellant provides the following remarks specifically directed to the Examiner's Answer ("Answer") mailed on May 27, 2009.

Regarding the rejection of claims 1, 6, 7, 14, 20, and 21 under 35 U.S.C. § 103(a), the Examiner asserts that *Prince* discloses "the position of the diaphragm being determined from the beamformed aiming of the array's elements with Doppler processing for tracking of diaphragm motion during locating setup" (Answer at page 3). Appellant agrees that *Prince* does disclose a transducer array 11. However, neither transducer array 11 nor any other element in *Prince* can constitute "at least two ultrasound transducer elements . . . wherein the position of the diaphragm is determined based upon the difference between the signals received by the individual transducer elements." *Prince* is completely silent regarding 1) determining a "difference between the signals received by the individual transducer elements" and 2) using the difference to determine "the position of the diaphragm," as recited in claim 1.

Iizuka fails to cure the deficiencies of *Prince*. The Examiner states that *Iizuka* evidences that a "scanning line transducer such as placed to cross the diaphragm in ensonation [sic] will detect the diaphragm by a reflectivity or impedance difference between received signals and so can be used to track displacement for any point along that line" (Answer at page 3).

The Examiner's characterization of *Iizuka* is confusing and unclear.

Nonetheless, the fact remains that *Iizuka* discloses only a single ultrasonic transducer 2 (Fig. 8). Nothing in *Iizuka* teaches or suggests the claimed "at least two ultrasound transducer elements on the patient extending in the direction of the longitudinal (z) axis of the patient over the lung sinus, wherein the position of the diaphragm is determined based upon the difference between the signals received by the individual transducer elements."

Iizuka does not teach or suggest providing signal difference information using an array. On the contrary, *Iizuka* is silent regarding an array. Thus, there can be no teaching or suggestion in *Iizuka* of using an array to provide any signal difference information, and certainly no teaching of "at least two ultrasound transducer elements on the patient extending in the direction of the longitudinal (z) axis of the patient over the lung sinus, wherein the position of the diaphragm is determined based upon the difference between the signals received by the individual transducer elements," as recited in claim 1.

In view of the failure to properly determine the scope and content of the prior art and to properly ascertain the differences between the prior art and claim 1, no *prima facie* case of obviousness has been established with respect to claim 1. The rejection under 35 U.S.C. §103 is therefore improper. Claims 6 and 14 depend from claim 1 and are thus also allowable over *Prince* in view of *Iizuka*, for at least the same reasons as claim 1.

Independent claim 7, though of different scope from claim 1, recites elements similar to those set forth above with respect to claim 1. Claim 7 is therefore allowable

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for at least the reasons presented above. Claims 20 and 21 depend from claim 7 and are thus also allowable over *Prince* in view of *Iizuka*, for at least the same reasons as claim 7. Therefore, Appellant respectfully requests that the Board reverse the rejection of claims 1, 6, 7, 14, 20, and 21 under 35 U.S.C. § 103(a).

Appellant also submits that *Riederer*, *Amazeen*, *Wessels*, and *Hernandez-Guerra* fail to cure the deficiencies of *Prince* and *Iizuka*, for at least the reasons presented in Appellant's Appeal Brief.

II. Conclusion

For the reasons given above, and those reasons provided in Appellant's Appeal Brief, Appellant respectfully submits that the rejection of the claims is in error and should be reversed.

If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, please charge such fees to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: July 8, 2009

By:


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